

# Amateur Astronomers

## JSC workers who can't get enough space on the job turn to telescopes on vacation

By Karen Schmidt

While some JSC employees use their time off to forget about space, members of JSC's Astronomical Society prepare for months to spend their vacation observing distant galaxies. About 25 members of JSC's Astronomical Society recently spent a week at the annual Texas Star Party, a gathering of amateur astronomers from as far away as Australia, at the Alto Frio Baptist Encampment near San Antonio. Sponsored by the Astronomical League, this year's party attracted more than 600 astronomers.

"The Texas Star Party is a combination summer camp, family reunion, technical conference and scientific expedition," said Dennis Webb, former president of JSC's Astronomical Society and manager of International Space Station integration. "I've made friends from all over the country over the last six years, and it is the highlight of my observing year."

Webb and other members agreed the challenge of attending is not only data collection but getting sensitive equipment prepared and shipped across Texas.

"Everyone is working on their latest projects right up till the last minute, and quite often don't finish them till they are at the star party," said member Chuck Shaw, a shuttle flight director. "This is kind of like bringing something to the launch pad without prior testing. The result is a lot of tinkering not in the controlled confines of a garage or shop, but out on the observing field, where dropping tiny critical parts into the grass can cause fits of despair and frustration. To avoid this, the 'prepared' amateur telescope maker has to bring spare parts for everything, which takes up room in the truck normally reserved for things like sleeping bags and clean clothes."

The JSC group set up together and the area quickly became known as "Gizmo City." Webb said many observers requested Astronomical League observing plans to earn certificates while others accepted assignments to search for supernova in various galaxies. Club visual observer Bob Hammond, a McDonnell Douglas safety engineer, was the most productive supernova campaigner, screening 12 galaxies during his one night of survey.

Most JSC observers agreed that a highlight of the week was their hands-on experience with a charge coupled device imaging camera, which provided a rewarding challenge in the form of mastering processing techniques.

"The microprocessor and charge coupled device electronic imaging chip really came of age in the telescope-making and amateur astronomy world at this year's Texas Star Party," said member Al Kelly, JSC's contracting officer's technical representative for the mission systems contract.

"Time with Richard Berry, one of the creators of the charge coupled device camera and related software, was superb," Shaw said. "I learned

more about image processing during the three days I spent with Richard and with our group than I had in the last year of working only occasionally in this rather subtle and complex area of expertise."

Shaw's time with Berry was well spent, earning him triple honors during the awards presentation on the final night of the party. Shaw's photo of M66 won for best charge coupled device astro photo. Shaw received a certificate of merit for his telescope design, won a special award for his combination shopping cart and field-computer desk and was designated the "Bag Lady of Gizmo Alley."

While cloudy skies hid the stars for several days, the observers kept busy processing images from the first two nights. The club set up a processing lab in the men's bunkhouse and tried various processing algorithms to obtain the best possible photos out of the digitally captured images.

"This was the only astronomy happening, so a crowd watched even in the wee hours," Webb said. "Amateur radio operators transmitted these images to a simultaneous sister star party in New South Wales, Australia, bouncing the extragalactic images off the earth's ionosphere."

The observers spent their afternoons in talk, and JSC members contributed significantly to the presentations. Webb presented

a paper on the club's supernova campaign and moderated an afternoon of talks. Richard Nugent presented a paper on "Determining the Age of the Crab Nebula Supernova," while Al Kelly introduced headline speaker Richard Berry.

"My personal highlighted experience would have to be the two evenings spent observing with Stephen J. O'Meara," said Becky Schultz, the club president one of the editors of "Sky and Telescope" magazine and long time observer and writer of astronomy. "We spent some time trying to see M81 with the naked eye, as it was my proposed challenge object for the Texas Star Party. Stephen and I also shared our sketches and drawings of various objects we each had made in our log books."

The JSC Astronomical Society is open to anyone interested in learning more about astronomy. Beginning astronomers are especially welcome. The Society meets at the Center for Advanced Space Studies, 3600 Bay Area Boulevard, usually the second Friday of each month. Novice classes start at 7 p.m. and the main meeting starts at 7:30 p.m. For more information call Randy Moore at x41079. The JSC Astronomical Society is recognized by the Employee Activities Association and welcomes families and members of the surrounding communities. The club's website is <http://www.ghgcorp.com/cbr/jscas.html>

The club and Challenger 7 Memorial Park also host several public viewings. Employees may join the amateur astronomers from dusk until 10 p.m. Saturday, July 12 to view the stars of summer. For more information on this special event, contact Bill Williams x32272. □



Some of the JSC's Astronomical Society attendees at the Texas Star Party gather around Dennis Webb's 17.5-inch telescope. From left are Robert Taylor, Karen Taylor, Stefanie Taylor, Chuck Shaw, Becky Schultz, Dennis Webb, Ann Webb, Curtis Schultz, Richard Nugent, Robert Bradbury, Hernan Contreras, Chris Randall, Susan DeChellis, Marc DeChellis and David Contreras.



Left: Chuck Shaw at his console with the telescope. Above: Shaw's Charge Coupled Device astro photo of galaxy M66 earned him best image during the star party. After months of tinkering, the chattering computer-controlled stepper motors were accurately pointing his large 14-inch telescope long enough to take a deep CCD exposure picture of M66, a big galaxy in the constellation Leo



From left, JSC's Al Kelly, Chuck Shaw and Dennis Webb processing images on the porch. During cloudy nights the inhabitants of "Gizmo City" kept busy processing images from the first two nights. The club set up a processing lab in the men's bunkhouse tried various processing algorithms to obtain the best possible photos out of the digitally captured images. Amateur radio operators transmitted these images to a simultaneous sister star party in New South Wales, Australia, bouncing the extragalactic images off the earth's ionosphere.

Photos by Chuck Shaw, Logan Kelly and Dennis Webb



Al Kelly and his son Logan prepare for a night of star gazing during the Texas Star Party near San Antonio. Center: Kelly's image of galaxy NGC 4236 captured during a clear night at the week-long party. Kelly received national recognition as the first JSC Astronomical Society member to build his own charge coupled device camera.